



SOLUTIONS WITHOUT BORDERS

State of California – IP Telephony Working Group

January 12, 2006

IP Telephony Questionnaire

Summary of Responses Received as of 12/14/05

| Reduce Costs | Increase Productivity | Enhance Customer Service | Prevent Tech Obsolescence | Improve Disaster Recovery | Responses |
|--------------|-----------------------|--------------------------|---------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ✓ | | | | | Eventual Cost Savings; Cost savings - reduced toll charges from long distance, conference bridges, and PSTN service providers resulting into positive return on investment. |
| ✓ | | | | | Lower total cost of ownership |
| | | ✓ | | | Building an enterprise call center platform |
| | | | ✓ | | Ease of scalability and extensibility |
| ✓ | | | | | Integration of voice and data networks serve to lower the total cost of ownership and maintain the reliability associated with the telecommunications network, while combining more efficient use of bandwidth. |
| ✓ | | | | | A converged voice and data network is a perfect fit for office moves, not only does it cut down on the required cabling, but it makes the upgrade to IPT easier because users are already expecting “new things” at the new office. |
| ✓ | ✓ | | | | Ease of ongoing maintenance – Moves, Adds and Changes (MACs) are no longer manual process. It is as simple as “plug and play” saving time and service costs. |
| | ✓ | ✓ | | | Ability to deploy new value added services increases operational efficiency, employee productivity and improves customer care capabilities. |
| | ✓ | ✓ | | | Unified messaging – streamline information like email, voice and fax messages in a single user interface to increase productivity and reduce communications overhead. |
| | ✓ | ✓ | | | Centralized voice services (e.g. extend the functionality of the Headquarters features to remote district offices) and enhanced call center features. |
| | | | ✓ | | Upgrade of Telephone system (while moving to a new building) |
| | | | ✓ | | Positioning for future |
| ✓ | ✓ | | | | Easier and faster MACs |

| Premises-based (self managed) | Premises-based (provider managed) | Hosted | Responses |
|----------------------------------|--------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------|
| ✓ | | | Premise based VoIP solution for call centers that includes interactive voice response, skills based routing, and voicemail |
| ✓ | ✓ | | IP PBX (presentations given by Avaya, Nortel and Interactive Intelligence) |
| | | ✓ | IP Centrex |
| | | ✓ | Prime factor for consideration will be based on the CALNET II offerings (e.g. different options available and emphasis on VOIP) |
| ✓ | ✓ | | Nortel |
| ✓ | ✓ | | Cisco |
| ✓ | ✓ | | Avaya |

Table Key

| Key | Definition | Description |
|---------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| P/A/NA | Planned/Addressable/Not Addressable | Planned by CDI/Addressable for IPTel WG/ Not addressable by CDI deployment |
| BPD | Best Practices Document | Document of best practices learned from CDI deployment (new) |
| EAD | Economic Analysis Document | Economic analysis of CDI deployment (planned) |
| FATP | Final Acceptance Test Plan | Acceptance Test Plan after final deployment (planned) |
| NRAD | Network Readiness Assessment Document | Document with network readiness assessment results (planned) |
| PATP | Pilot Acceptance Test Plan | Acceptance Test Plan for pilot network (planned) |
| PIP | Project Implementation Plan | Implementation Plan for TIRP covering project management, training, deployment, testing, maintenance, etc. (planned) |
| SAD | Special Assessment Document | Document with testing plan and outcome for IPTel WG specific issues (new) |

Question #3. The issues you would like pilot to address

| | P/A/NA | Issues | Method | Period |
|-----|--------|---------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| 1. | A | Maintenance task time comparing traditional voice to VoIP (e.g. moving a phone, adding a new phone, setting up voicemail, etc.) | SAD | Pilot |
| 2. | P | How does CDI plan to maintain Quality of Service (QoS) as not to encounter any "packet loss" | BPD | Final |
| 3. | P | CDI's organization structure, how are they planning to change with VoIP | BPD | Final |
| 4. | P | What new automated monitoring tools will be brought into CDI | FATP | Final |
| 5. | P | How is training addressed for support staff and end users | PIP | Final |
| 6. | P | Network assessment and infrastructure readiness | NRAD | Pilot |
| 7. | P | Careful planning and thoughtful implementation | BPD | Final |
| 8. | NA | Hosted service or in-house | - | - |
| 9. | P | Combined units (voice and data) under same Division Manager before deployments began | BPD | Final |
| 10. | P | Costs – initial and ongoing | EAD | Final |
| 11. | A | Is there really a good return on investment | EAD | Final |
| 12. | P | E-911 issue (number and location display) | PATP | Pilot |
| 13. | P | Quality of Service standards (QOS) - establish Service Level Agreements – define expected throughput, jitter, latency and packet loss | PATP | Pilot |
| 14. | P | IP phones – does the phone support Power over Ethernet so that it would work without interruption during a power outage. | PATP | Pilot |
| 15. | P | "Power Fail" phones in key locations | FATP | Final |
| 16. | P | Vendor's troubleshooting capabilities | FATP | Final |
| 17. | P | Internet insecurity | FATP | Final |
| 18. | P | Staffing levels needed to support converged voice/data networks | BPD | Final |
| 19. | P | Redundancy | PATP | Pilot |
| 20. | P | Training programs | PIP | Final |
| 21. | NA | Interoperability with existing telephony systems | - | - |
| 22. | P | Match "five nines" uptime | FATP | Final |
| 23. | P | Call accounting and billing system | FATP | Final |
| 24. | P | Quantify peak bandwidth required per phone per phone call | PATP | Pilot |

Continued...

| | P/A/NA | Issues | Method | Period |
|-----|---------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| 25. | A | Audit trail of the monitoring which provides before and after trending on application usage, bandwidth consumption, and packet performance. | SAD | Final |
| 26. | A | Federal and state regulations | SAD | Final |
| 27. | P | Interoperability with existing data network | FATP | Final |
| 28. | P | User acceptance and buy-in | BPD | Final |
| 29. | P | Actual cost saving | EAD | Final |